



**United States Environmental Protection Agency
Region 9 Laboratory**

**1337 S. 46th Street Building 201
Richmond, CA 94804**

Date: 3/15/2012

Subject: Analytical Testing Results - Project R33911
SDG: 12067A

From: Brenda Bettencourt, Director
EPA Region 9 Laboratory
MTS-2

To: Richard Fetzer
US EPA Region 3, Eastern Response Branch
3HS31

Attached are the results from the analysis of samples from the **Dimock Residential Groundwater** project. These data have been reviewed in accordance with EPA Region 9 Laboratory policy.

A full documentation package for these data, including raw data and sample custody documentation, is on file at the EPA Region 9 Laboratory. If you would like to request additional review and/or validation of the data, please contact Eugenia McNaughton at the Region 9 Quality Assurance Office.

If you have any questions, please ask for Richard Bauer, the Lab Project Manager at (510)412-2300.

Analyses included in this report:

Dissolved Hydrocarbon Gases by GC



United States Environmental Protection Agency
Region 9 Laboratory

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Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Richard Fetzter

Project Number: R33911

Project: Dimock Residential Groundwater

US EPA Region 3, Eastern Response Branch

100 Gypsum Road

Stroudsburg PA, 18360

SDG: 12067A

Reported: 03/15/12 09:23

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
FB19	1203018-01	Water	03/05/12 09:36	03/07/12 10:00
HW60	1203018-02	Water	03/05/12 12:25	03/07/12 10:00
TB49	1203018-03	Water	03/05/12 07:15	03/07/12 10:00
HW56	1203018-04	Water	03/05/12 16:54	03/07/12 10:00
TB50	1203018-05	Water	03/05/12 10:00	03/07/12 10:00
FB20	1203020-01	Water	03/06/12 14:00	03/08/12 09:50
HW61	1203020-02	Water	03/06/12 15:42	03/08/12 09:50
HW61-P	1203020-03	Water	03/06/12 16:00	03/08/12 09:50
HW61z	1203020-04	Water	03/06/12 15:42	03/08/12 09:50
TB51	1203020-05	Water	03/06/12 07:05	03/08/12 09:50
FB21	1203024-01	Water	03/08/12 13:38	03/09/12 10:15
HW50	1203024-02	Water	03/08/12 15:09	03/09/12 10:15
TB52	1203024-03	Water	03/08/12 10:35	03/09/12 10:15

SDG ID 12067A

Dissolved Hydrocarbon Gases:

The methane result for samples 1203020-03 and 1203020-04 was flagged as estimated since the concentration of this analyte in the sample was less than five times the concentration found in the associated trip and field blanks.

A chromatographic peak was found within the presumed retention time window for propane for sample 1203018-04. Propane is likely present in this sample.

Samples in work order 1203024 (received on 3/9/12) were at received at 8 degrees C. This is above the recommended temperature range of 0 to 6 degrees C. No significant impact on the sample results is expected.

Work Order(s)

1203018

1203020

1203024



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Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1203018-01						Water - Sampled: 03/05/12 09:36			
Sample ID: FB19						Dissolved Gases by RSK-175			
Methane		0.6	C1, J	1.2	ug/L	B2C0040	03/08/12	03/08/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>			118 %	66.4-153%		"	"	"	
Lab ID: 1203018-02						Water - Sampled: 03/05/12 12:25			
Sample ID: HW60						Dissolved Gases by RSK-175			
Methane	RE1	21,000		210	ug/L	B2C0050	03/09/12	03/09/12	RSK-175/SOP325
Ethane		10		1.2	"	B2C0040	03/08/12	03/08/12	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>			115 %	66.4-153%		"	"	"	
<i>Surrogate: Acetylene</i>			99 %	66.4-153%		B2C0050	03/09/12	03/09/12	
Lab ID: 1203018-03						Water - Sampled: 03/05/12 07:15			
Sample ID: TB49						Dissolved Gases by RSK-175			
Methane		ND	U	1.2	ug/L	B2C0040	03/08/12	03/08/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>			113 %	66.4-153%		"	"	"	
Lab ID: 1203018-04						Water - Sampled: 03/05/12 16:54			
Sample ID: HW56						Dissolved Gases by RSK-175			
Methane	RE1	8,700		77	ug/L	B2C0050	03/09/12	03/09/12	RSK-175/SOP325
Ethane		62		1.2	"	B2C0040	03/08/12	03/08/12	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>			114 %	66.4-153%		"	"	"	
<i>Surrogate: Acetylene</i>			98 %	66.4-153%		B2C0050	03/09/12	03/09/12	
Lab ID: 1203018-05						Water - Sampled: 03/05/12 10:00			
Sample ID: TB50						Dissolved Gases by RSK-175			
Methane		ND	U	1.2	ug/L	B2C0040	03/08/12	03/08/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>			117 %	66.4-153%		"	"	"	
Lab ID: 1203020-01						Water - Sampled: 03/06/12 14:00			
Sample ID: FB20						Dissolved Gases by RSK-175			
Methane		1.2		1.2	ug/L	B2C0040	03/08/12	03/08/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325



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Project: Dimock Residential Groundwater

US EPA Region 3, Eastern Response Branch
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SDG: 12067A
Reported: 03/15/12 09:23

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1203020-01							Water - Sampled: 03/06/12 14:00		
Sample ID: FB20							Dissolved Gases by RSK-175		
Surrogate: Acetylene		106 %		66.4-153%		B2C0040	03/08/12	03/08/12	
Lab ID: 1203020-02							Water - Sampled: 03/06/12 15:42		
Sample ID: HW61							Dissolved Gases by RSK-175		
Methane	RE1	ND	U	1.2	ug/L	B2C0050	03/09/12	03/09/12	RSK-175/SOP325
Ethane	RE1	ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene	RE1	ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene	RE1	113 %		66.4-153%		"	"	"	
Lab ID: 1203020-03							Water - Sampled: 03/06/12 16:00		
Sample ID: HW61-P							Dissolved Gases by RSK-175		
Methane		0.9	B1, C1, J	1.2	ug/L	B2C0040	03/08/12	03/08/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene		113 %		66.4-153%		"	"	"	
Lab ID: 1203020-04							Water - Sampled: 03/06/12 15:42		
Sample ID: HW61z							Dissolved Gases by RSK-175		
Methane		0.6	B1, C1, J	1.2	ug/L	B2C0040	03/08/12	03/08/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene		111 %		66.4-153%		"	"	"	
Lab ID: 1203020-05							Water - Sampled: 03/06/12 07:05		
Sample ID: TB51							Dissolved Gases by RSK-175		
Methane		0.8	C1, J	1.2	ug/L	B2C0040	03/08/12	03/08/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene		112 %		66.4-153%		"	"	"	
Lab ID: 1203024-01							Water - Sampled: 03/08/12 13:38		
Sample ID: FB21							Dissolved Gases by RSK-175		
Methane		ND	U	1.2	ug/L	B2C0050	03/09/12	03/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene		106 %		66.4-153%		"	"	"	
Lab ID: 1203024-02							Water - Sampled: 03/08/12 15:09		
Sample ID: HW50							Dissolved Gases by RSK-175		
Methane		0.6	C1, J	1.2	ug/L	B2C0050	03/09/12	03/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325



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Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1203024-02							Water - Sampled: 03/08/12 15:09		
Sample ID: HW50							Dissolved Gases by RSK-175		
Ethene		ND	U	1.1	ug/L	B2C0050	03/09/12	03/09/12	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		111 %		66.4-153%		"	"	"	
Lab ID: 1203024-03							Water - Sampled: 03/08/12 10:35		
Sample ID: TB52							Dissolved Gases by RSK-175		
Methane		ND	U	1.2	ug/L	B2C0050	03/09/12	03/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		109 %		66.4-153%		"	"	"	



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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B2C0040 - RSK175 - Dissolved HC Gases

Prepared & Analyzed: 03/08/12
Dissolved Gases by RSK-175 - Quality Control

Blank (B2C0040-BLK1)

Methane	ND	U		1.2 ug/L						
Ethane	ND	U		1.2 "						
Ethene	ND	U		1.1 "						

Surrogate: Acetylene 65.2 " 66.5 98 66.4-153

LCS (B2C0040-BS1)

Methane	47			1.2 ug/L	44.1		106	70-130		200
Ethane	92.3			1.2 "	83.2		111	77-137		200
Ethene	86.7			1.1 "	78.3		111	78-138		200

Surrogate: Acetylene 79.0 " 72.0 110 66.4-153

Matrix Spike (B2C0040-MS1)

Source: 1203018-04

Methane	6,490	Q10		1.2 ug/L	44.1	6,510	NR	70-130		20
Ethane	146			1.2 "	83.2	61.8	102	70-130		20
Ethene	78.8			1.1 "	78.3	ND	101	70-130		20

Surrogate: Acetylene 70.4 " 72.0 98 66.4-153

Matrix Spike Dup (B2C0040-MSD1)

Source: 1203018-04

Methane	4,870	Q10		1.2 ug/L	44.1	6,510	NR	70-130	29	20
Ethane	137			1.2 "	83.2	61.8	90	70-130	7	20
Ethene	83.7			1.1 "	78.3	ND	107	70-130	6	20

Surrogate: Acetylene 75.4 " 72.0 105 66.4-153

Batch B2C0050 - RSK175 - Dissolved HC Gases

Prepared & Analyzed: 03/09/12
Dissolved Gases by RSK-175 - Quality Control

Blank (B2C0050-BLK1)

Methane	ND	U		1.2 ug/L						
Ethane	ND	U		1.2 "						
Ethene	ND	U		1.1 "						

Surrogate: Acetylene 80.3 " 66.5 121 66.4-153

LCS (B2C0050-BS1)

Methane	42.9			1.2 ug/L	44.1		97	70-130		200
Ethane	85.5			1.2 "	83.2		103	77-137		200
Ethene	80.2			1.1 "	78.3		102	78-138		200

Surrogate: Acetylene 73.6 " 72.0 102 66.4-153



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Qualifiers and Comments

Q10 The analyte concentration in the unfortified sample is significantly greater than the concentration spiked into the matrix spike and matrix spike duplicate. The reported spike recovery is not a meaningful measure of the dataset's analytical accuracy.

J The reported result for this analyte should be considered an estimated value.

C1 The reported concentration for this analyte is below the quantitation limit.

B1 The concentration of this analyte found in this sample was less than five times the concentration found in the associated method blank.

U Not Detected

NR Not Reported

RE1, RE2, etc: Result is from a sample re-analysis.